

LONG TERM PAVEMENT PERFORMANCE PROGRAM DIRECTIVE



For the Technical Direction of the LTPP Program



Program Area:	Monitoring	Directive Number:	D-12
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Subject:	LTPP Manual Distress Data Quality		

Distress is an extremely important element in LTPP data collection. Studies of the quality and repeatability of manually collected distress data indicate better quality data are acquired by raters who are called on to perform surveys frequently. Knowledge of procedures in the Distress Identification Manual for the Long-Term Pavement Performance Project, SHRP-P-338 (DIM) is critical; however, this MUST be reinforced through frequent application. The following sections detail specific requirements intended to improve distress data quality.

Training

The Regional Coordination Office Contractor (RCOC) is responsible for collecting distress data of the highest quality. To fulfill that responsibility, the RCOC must train the designated staff to a high level of competence in the knowledge and procedures contained in the DIM. A combination of classroom and field training activities must be provided on an ongoing basis to maintain the competence of the distress raters. A training plan and syllabus shall be developed and submitted to FHWA LTPP staff for review and approval. The RCOC shall use the course materials developed for the National Highway Institute Course "Pavement Distress Identification Workshop" as a basis for the training syllabus and shall be required to schedule the presentation of these materials on an as-needed basis to maintain staff competence.

Initial Rater Accreditation

Pavement distress surveys for the LTPP program must be performed by experienced personnel who have successfully completed the Distress Rater Accreditation Workshop and who also regularly perform distress surveys.

The accreditation workshop is intended for trained, experienced personnel; those with experience in distress data collection and demonstrated familiarity with the DIM as determined by the RCOC. For personnel attending the accreditation workshop for the first time, the following minimum criteria are established:

- , high school education or equivalent**
- , previous experience in distress data collection (e.g., PAVER)**
- , formal training and familiarization in the DIM at the RCOC level using the training plan and syllabus as approved by FHWA LTPP staff**
- , assisting an accredited rater in performing distress data collection for asphalt and jointed concrete pavement (a minimum of two sections for each)**

Maintaining Qualification

In order to be remain qualified as a LTPP Distress Rater, a rater MUST regularly perform surveys following accreditation. Office reviewers must also perform a number of surveys each year in order to remain qualified to properly assess the quality of the surveys. The minimum level of distress survey activity should consider the normal duties assigned the individual. The requirements for personnel collecting manual distress data for entry in the IMS are:

- Designated field personnel:** should be expected perform at least 36 surveys in a year, ideally evenly distributed throughout that time period. For new raters: the first 12 surveys should be conducted with direct supervision by a qualified rater.
- Office reviewers:** must remain proficient in distress identification procedures but may not be available on a regular basis. They should perform a minimum of 24 surveys at any time during that year.
- All distress raters and office reviewers shall successfully complete an Accreditation Workshop annually.**

In the event that the minimum number of distress surveys has not been achieved in a year, the rater is considered no longer qualified. Requalification shall consist of attendance at formal RCOC distress training sessions followed by a series of 4 field surveys (2 on asphalt surfaced and 2 on jointed concrete) conducted by the requalifying rater and monitored by a qualified rater. The successful completion of these requirements and successful completion of an Accreditation Workshop are to be documented by the RCOC and submitted to the COTR for review and approval. Upon approval, the rater is once again qualified for LTPP distress surveys. Exceptions to the above are not permitted without the prior written consent of the COTR.

Data Quality

The RCOC is charged with the responsibility for quality control and quality assurance of the manual distress data. The training, accreditation, and minimum activity levels required for raters and reviewers are all intended to reduce data variability. Office reviewers cannot visit each test section to verify the surveys submitted by their staff. As a consequence, they must rely on the body of information collected in prior surveys of the section in order to make judgements on data quality for a newly submitted survey. The best information available is the time-series data provided by a compilation of all prior surveys and any information on construction activities which may have occurred. Therefore, in the data handling plans for manual distress surveys, the RCOC shall include time series data review as a key element in the office review process.

Questions concerning this directive should be addressed to Antonio Nieves of the FHWA LTPP Division Office at (703) 285-2526.

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